WHAT IS CLAIMED IS:

1. A dynamo-electric machine comprising:

a yoke;

magnetic poles fixed in said yoke;

a shaft rotatably provided in said yoke;

an armature having a winding consisting of a plurality of coil portions each formed by lap-winding a conductor between a corresponding pair of slots formed in an outer circumferential surface portion of a core fixed to said shaft in such a way as to extend in an axial direction thereof;

a commutator fixed to an end portion of said shaft and having a plurality of segments to which lead parts of both end sections of said coil portions are electrically connected; and

brushes made to respectively abut against the surfaces of said segments of said commutator,

wherein n (incidentally, "n" is a common divisor of the number of the magnetic poles and the number of the slots and equal to or more than 2) of said coil portions are parallel-connected between said segments,

wherein said coil portions are disposed in such a manner as to be symmetrical with respect to a mechanical angle of 360 degrees, wherein lead parts of said coil portions other than one of said coil portions, which is nearest in a circumferential direction to each of said segments, are drawn therefrom in a same circumferential direction.

2. A dynamo-electric machine comprising:

a shaft;

an armature having a winding consisting of a plurality of coil portions

formed by lap-winding and wave-winding a conductor between each pair of slots formed in an outer circumferential surface portion of a core fixed to said shaft in such a way as to extend in an axial direction thereof;

a commutator fixed to an end portion of said shaft and having a plurality of segments to which lead parts of both end sections of said lap-wound and wave-wound coil portions are electrically connected; and

brushes made to respectively abut against the surfaces of said segments of said commutator,

wherein said lap-wound coil portion and said wave-wound coil portion, the respective of which have lead parts to be connected to a same one of the segments, are disposed in such a manner as to be symmetrical with respect to a mechanical angle of 360 degrees, and wherein both lead parts of said wave-wound coil portions are drawn therefrom in a same circumferential direction.

3. A dynamo-electric machine according to claim 1, each of said coil portions comprises a plurality of small coil portions parallel-connected to one another.

4. A dynamo-electric machine according to claim 1, wherein the number of the slots and the number of the segments are 22, wherein the number of poles is 4, and wherein two of the coil portions are parallel-connected between each pair of said segments.

5. A dynamo-electric machine according to claim 1, which further comprises an equalizer connecting said segments that are to be at equal electric potential.

6. A dynamo-electric machine according to claim 5, wherein said conductor and said equalizer are constituted by members made of a same material, and wherein said winding and said equalizer are continuously connected to each other.

7. A dynamo-electric machine according to claim 1, wherein said conductor is an enamel-coated round wire.

8. A dynamo-electric machine according to claim 1, which is a motor for use in an electric power steering system.